

Appln No. 09/872,645

Amdt date January 18, 2005

Reply to Office action of October 18, 2004

REMARKS/ARGUMENTS

The above identified patent application has been amended and reconsideration and reexamination are hereby requested.

Claims 4, 8 - 9, 13, 17 - 42, 45, 48 - 49, 52, 54 - 55 and 58 - 62 are now in the application. Claims 4, 8, 13, 17, 40, 45, 48, 52, 54, 58, 59, and 61 have been amended. Claims 1 - 3, 5 - 7, 10 - 12, 14 - 16, 43 - 44, 46 - 47, 50 - 51, 53 and 56 - 57 have been cancelled.

The Examiner has rejected Claims 1 - 3, 5 - 12, 14 - 18, 43 - 44, 46 - 51 and 53 - 57 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,772,391 to Shin.

Claims 1 - 3, 5 - 7, 10 - 12, 14 - 16, 43 - 44, 46 - 47, 50 - 51, 53 and 56 - 57 have been cancelled.

The Examiner has rejected Claims 8, 17, 48 and 54 on the basis that "Fig. 6 [of the Patent to Shin] shows two 'delay registers' represented by two rectangles in the state machine (21)."

However, Shin mentions the term "delay register" only once in the entire patent, in its discussion of prior art, where it states: "A FEC encoder is a finite-state machine that relies upon nodes or states and delay registers." (See column 1, lines 58 - 60) (emphasis added). The use of the term "delay registers" suggests that any number of delay registers is allowable, including one. Claims 8, 17, 48 and 54 all require "at least two delay registers" (emphasis added).

The content of the first encoder (21) disclosed in Fig. 6 of Shin is not described in the specification of Shin. Nowhere does Shin state that the rectangles represent delay registers.

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The Applicant submits that Claims 8, 17, 48 and 54 are therefore not anticipated by Shin.

Claim 8 has been amended as it depended on now cancelled Claim 1. Claim 8 now includes the elements of cancelled Claim 1. Claim 9 is dependent on Claim 8. As such, Claim 9 is believed allowable based upon Claim 8.

Claim 17 has been amended as it depended on now cancelled Claim 10. Claim 17 now includes the elements of cancelled Claim 10. Claim 18 is dependent on Claim 17. As such, Claim 18 is believed allowable based upon Claim 17.

Claim 48 has been amended as it depended on now cancelled Claim 43. Claim 48 now includes the elements of cancelled Claim 43. Claim 49 is dependent on Claim 48. As such, Claim 49 is believed allowable based upon Claim 48.

Claim 54 has been amended as it depended on now cancelled Claim 50. Claim 54 now includes the elements of cancelled Claim 50. Claim 55 is dependent on Claim 54. As such, Claim 55 is believed allowable based upon Claim 54.

The Examiner has rejected as obvious Claims 19 - 21, 23 - 27, 31 - 33 and 35 - 39 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,772,391 to Shin in view of U.S. Patent 6,483,283 to Stephen et al.

Independent Claims 19 and 31 call for "an RF stage coupled to the encoder." The Examiner states that "[while] Shin fails to disclose 'an RF stage coupled to the encoder' [as required by Claims 19 and 31 of the present Application] . . . Stephen et al. teaches the use of an encoder in an RF communication system [and] it would have been obvious to one skilled in the art to

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use the encoder of Shin in an RF transmitter, as taught by Stephen et al [sic],"

However, Stephen et al. only discusses radio transmitters in its description of Fig. 1, which shows a turbo encoder used in a satellite communication system. (See column 3, line 52 - column 4, line 10). There, radio transmitter (135) is an external device, located outside the universal modem system (195) that includes the turbo encoder (120). The radio transmitter (135) also requires analog input. Stephen et al. therefore suggests locating the radio transmitter externally and to communicate in an analog manner by modulating the digital signal into an analog signal, as disclosed by the input and output shown for the modulator (130) in Fig. 1.

By contrast, the RF stage disclosed in the present Application is an integral part of the transmitter device, shown in Fig. 1 of the present Application, where the transmitter (14) includes both the TCM encoder (18) and the RF stage (26). Both components communicate digitally as described in the second paragraph of the Detailed Description of the present Application. (See page 6, line 32 - page 7, line 15 of the present Application). The transmitter of the present Application is therefore an integrated and fully digital device.

Hence, Stephen et al. teaches away from the solution disclosed in the present Application and as claimed in independent Claims 19 and 31. The Applicant submits that Claims 19 and 31 are therefore not obvious and unpatenable over Shin in view of Stephen et al.

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Claims 20 - 21 and 23 - 27 are dependent on Claim 19. As such, these claims are believed allowable based upon Claim 19. Claims 32 - 33 and 35 - 39 are dependent on Claim 31. As such, these claims are believed allowable based upon Claim 31.

Regarding Claims 4, 13, 22, 28 - 30, 34, 40 - 42, 45, 52, and 58 - 62, the Examiner has concluded that those Claims would be allowable if rewritten in independent form including the limitations of the rejected base Claims.

Claims 22 and 28 - 30 are dependent on Claim 19. As such, these claims are believed allowable based upon Claim 19. Claims 34 and 40 - 42 are dependent on Claim 31. As such, these claims are believed allowable based upon Claim 31.

Claims 4, 13, 45, 52, 58, 59 and 61 have been amended, following the Examiner's suggestions. Claim 60 is dependent on Claim 59. As such, Claim 60 is believed allowable based upon Claim 59.

Accordingly, in view of the above amendment and remarks it is submitted that the Claims are patentably distinct over the prior art and that all the objections and rejections to the Claims have been overcome. Reconsideration and reexamination of the above Application is requested.

Respectfully submitted,

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A handwritten signature in black ink, reading "Richard J. Paciulan", is written over a horizontal line.

By

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